COMMERCE GENERAL ARCHITECTURE

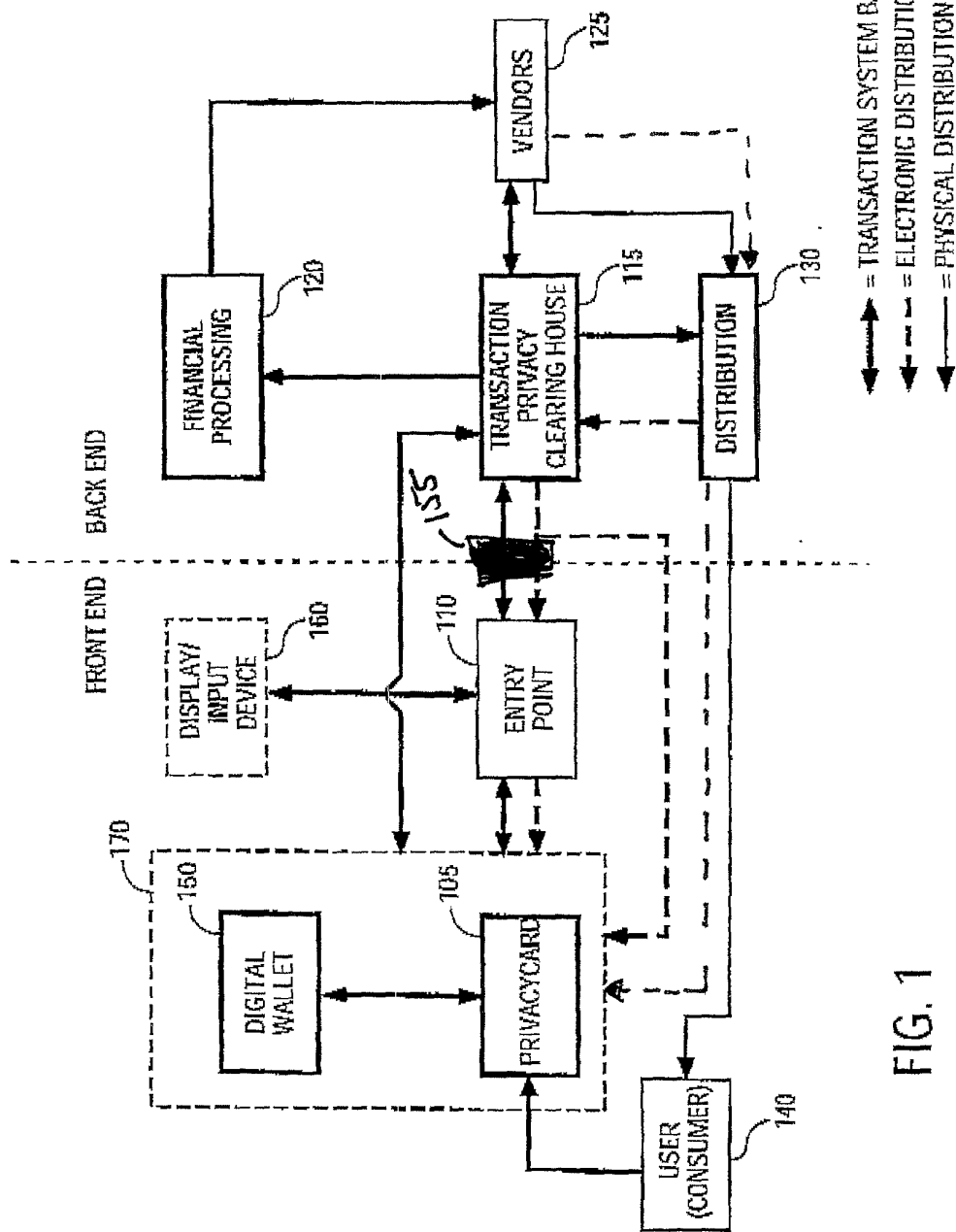
FRONT END | BACK END

DISPLAY/ INPUT DEVICE — 160

ENTRY POINT — 110

DIGITAL WALLET — 150

PRIVACYCARD — 105

170

USER (CONSUMER) — 140

FINANCIAL PROCESSING — 120

TRANSACTION PRIVACY CLEARING HOUSE — 115

VENDORS — 125

DISTRIBUTION — 130

155

= TRANSACTION SYSTEM BACKBONE
= ELECTRONIC DISTRIBUTION CHANNEL
= PHYSICAL DISTRIBUTION CHANNEL

FIG. 1

205

PROCESSOR 210   230

225

MEMORY 215   INPUT/
OUTPUT 220

250   240

FIG. 2

310

315
PROCESSOR
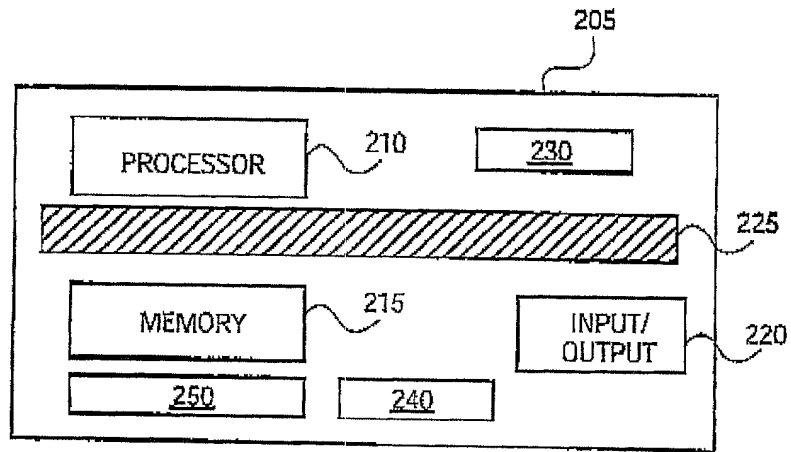
330

320
MEMORY

DISPLAY

305

335

325
INPUT/
OUTPUT

FIG. 3

Commerce General Architecture ~POS Terminal:

Front End | Back End

Display / Input Device

POS Terminal — 410

Digital Wallet — 450

PrivacyCard — 405

Consumer — 440

Financial Processing — 420

Transaction Privacy Clearing House — 415

Vendors — 425

Distribution — 430

= Transaction system backbone
= Electronic distribution channel
= Physical distribution channel
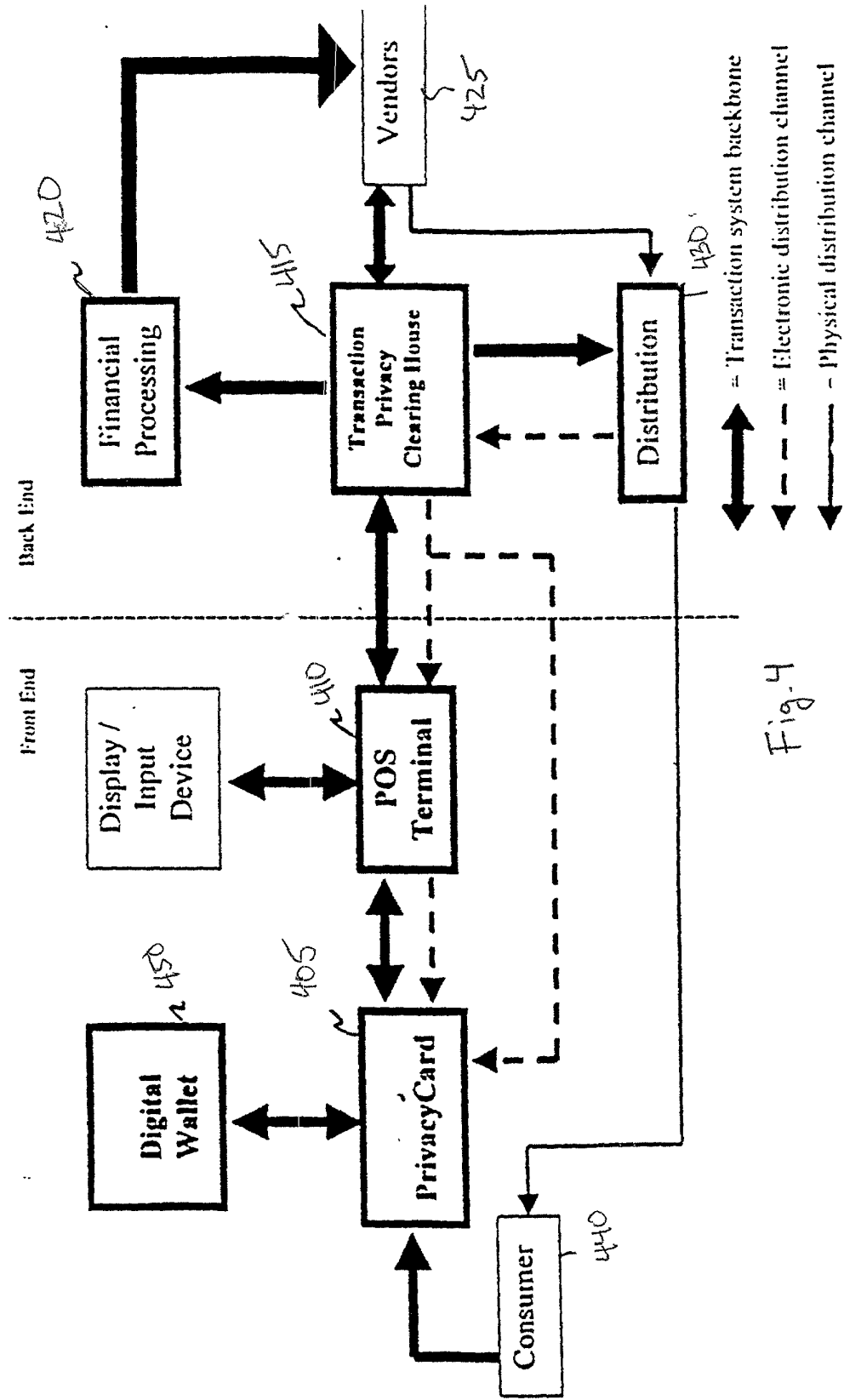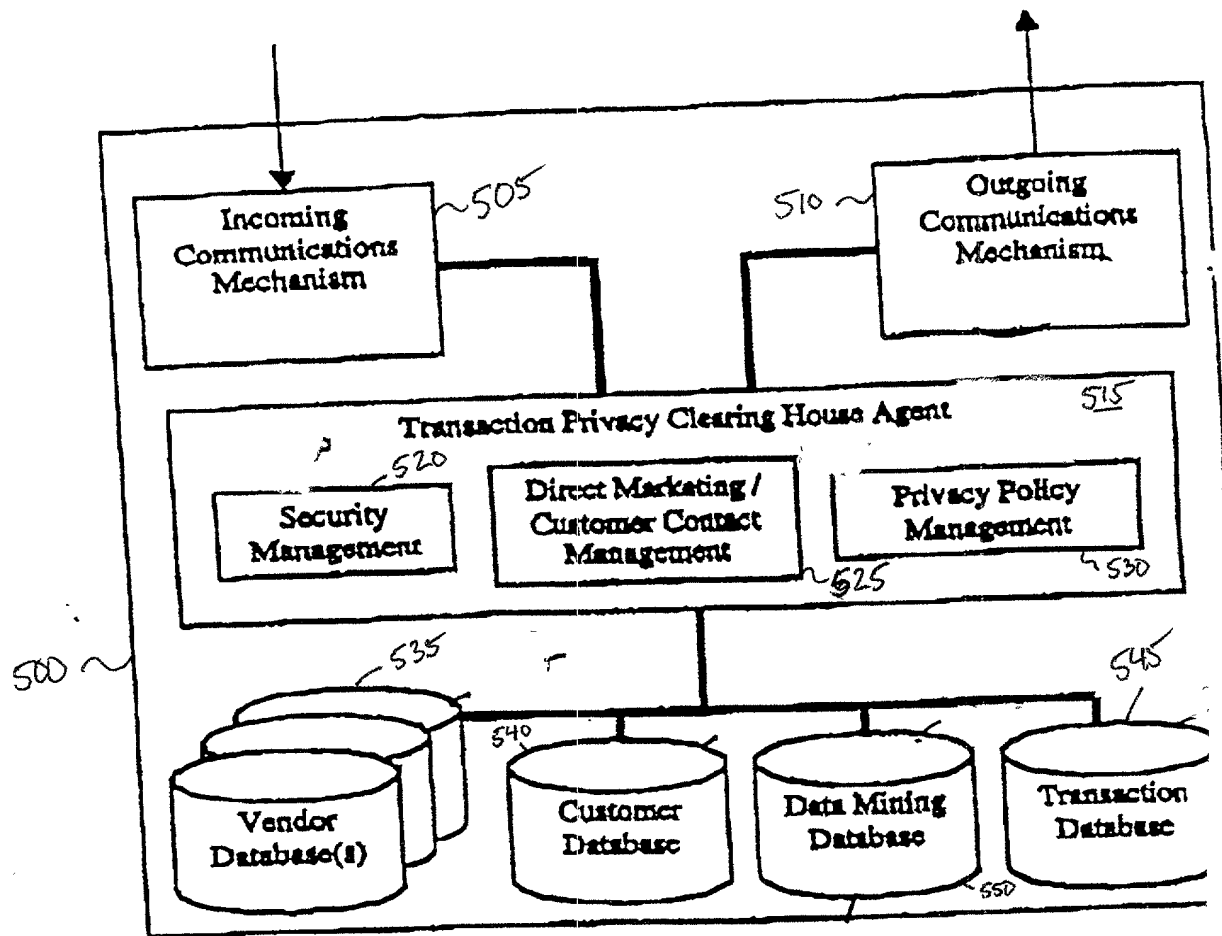
Fig. 4

Transaction Privacy Clearing House: Major Components

Figure 5

HEADER 610

DATA 620

600

Fig. 6

header 610

1. Source(s)/Author(s)
2. Location History
3. Last Location
4. Payment Amount |Split
5. Encryption
6. Sufficient Funds
7. Verification

Fig. 7

USER Personal Transaction Device Remote Location TPCH

Request Content 806
Provide Content 808
Provide Content 804
Provide Content 802

Figure 8A

Request Content 834
Request Payment 836
Provide authentication 838
Provide Content 840
Provide Content 832
Provide Payment 842
Provide Payment 844

Figure 8B

Request Content 864
Request Payment 866
Provide Authorization 868
Provide Content 862
Provide Payment 870
Confirm Payment 872
Provide Content 878
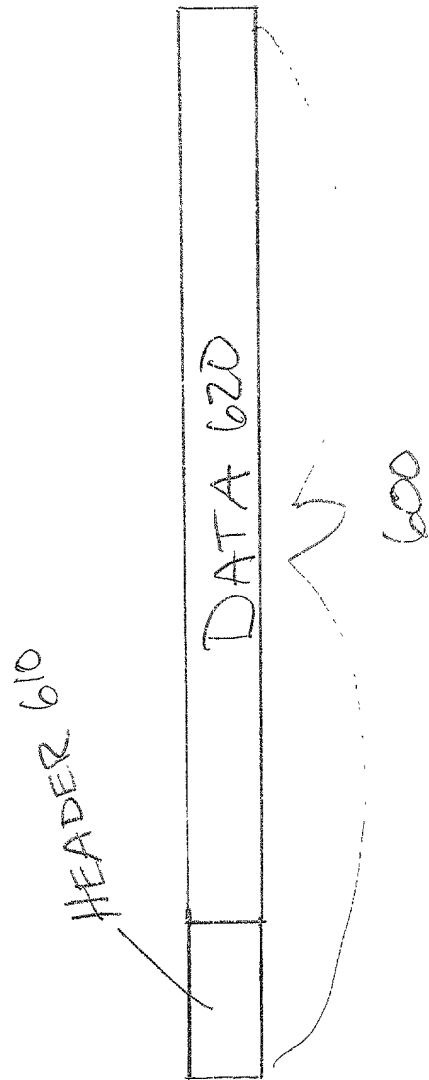Provide Content 860
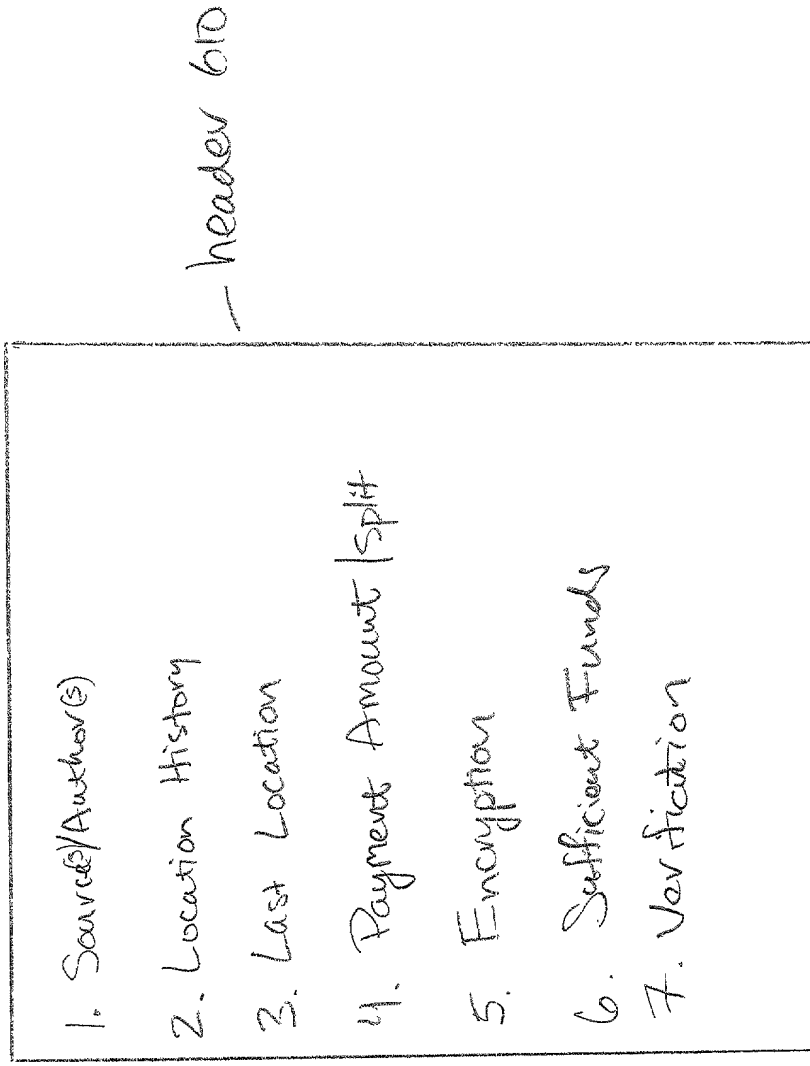Provide Payment 872
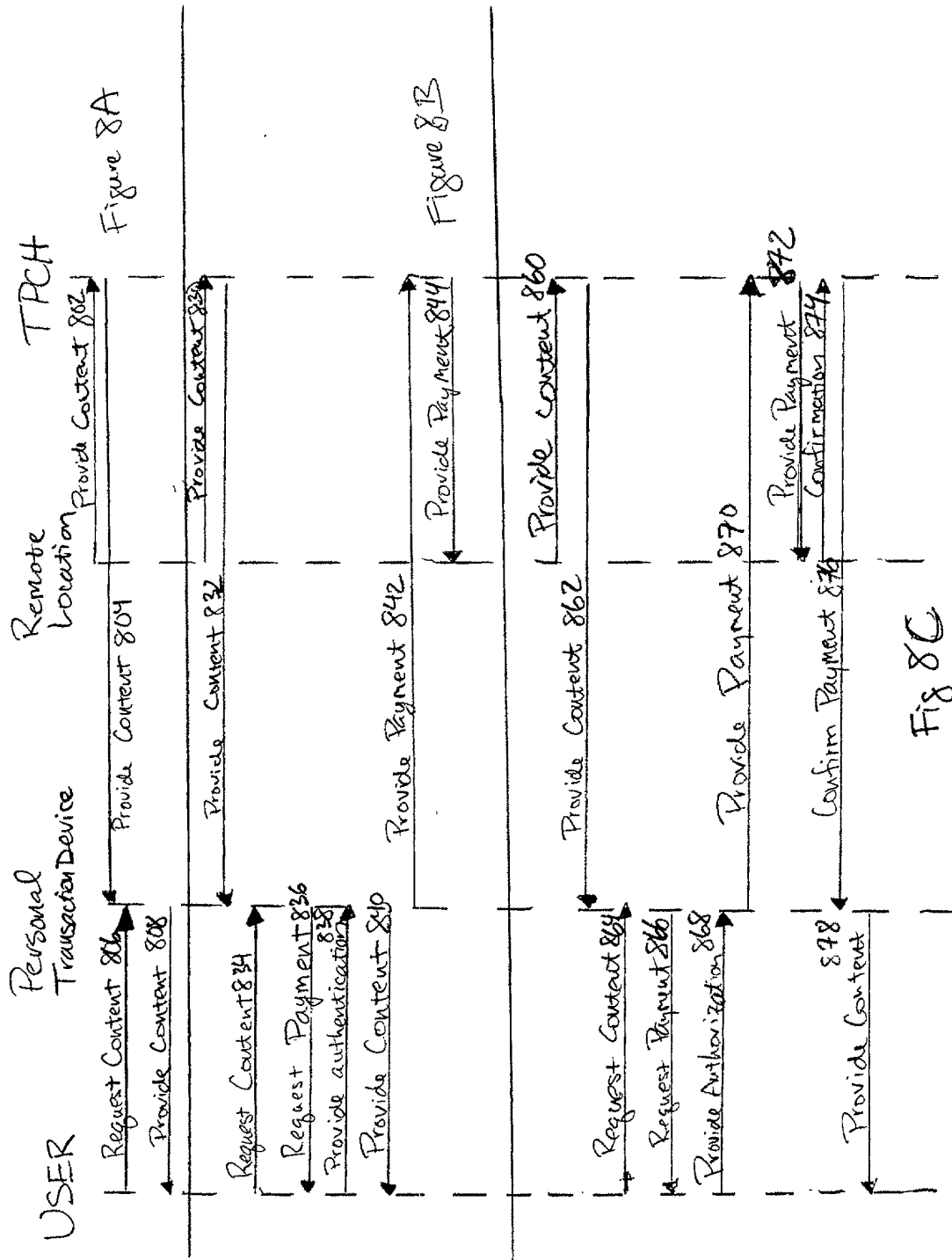Provide Payment Confirmation 874

Fig 8C

USER Personal Transaction Device #1 Remote Location TPCH Personal Transaction Device #2

Provide Content 902

Request Content 904
Request Payment 906
Provide Authoriz. 908
Provide Content 910

Provide Payment 912

Provide Payment 914

Figure 9A

Provide Content 940
Confirm Use of Content 942
Confirm Receipt of Content 944
Request Payment 946
Request Payment 948
No Payment 950

Request Payment 952
Refuse Payment 954
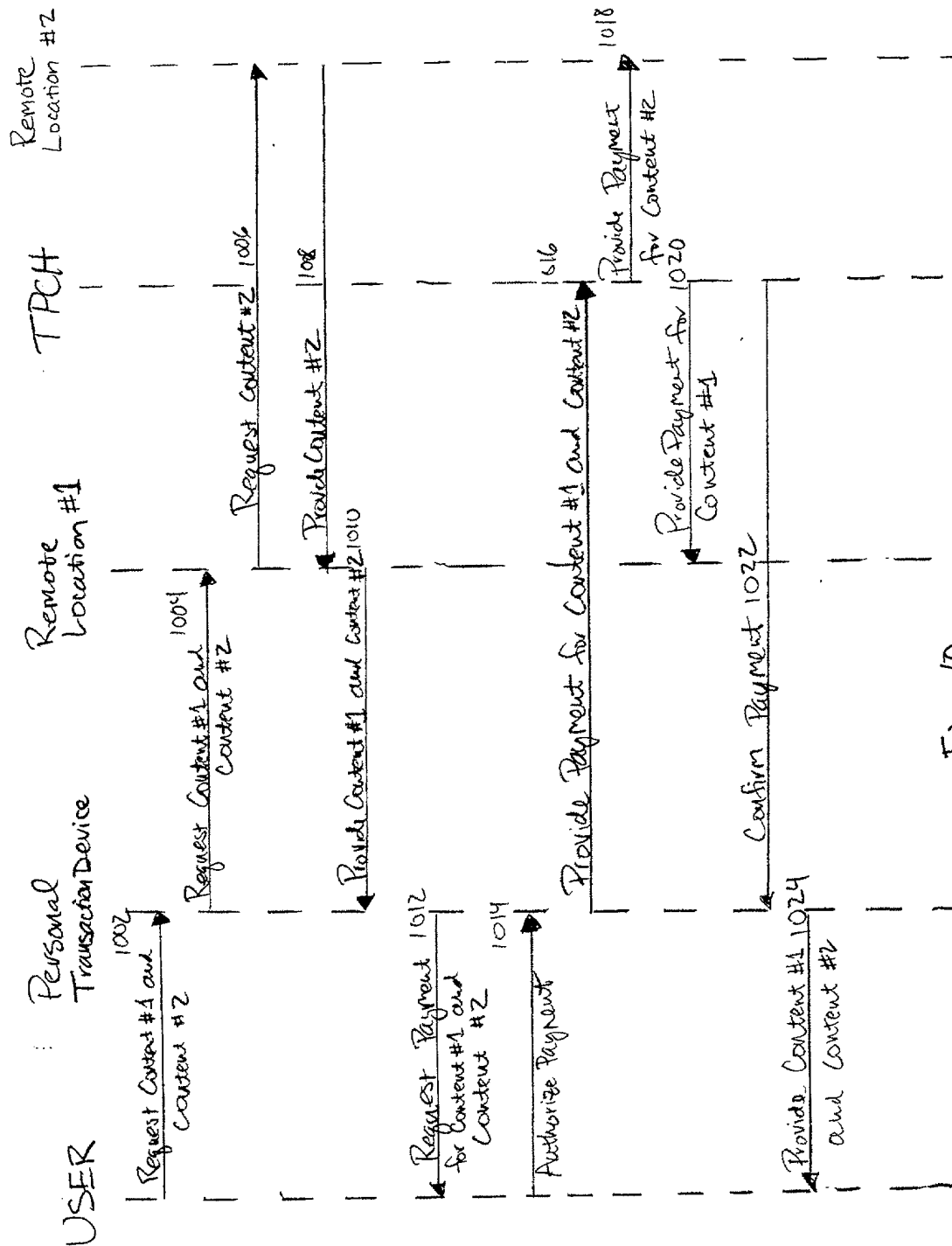Disable Content 956

Disable Content 958

FIG. 9B

Fig. 10

USER

Personal Transaction Device

Remote Location #1

TPCH

Remote Location #2

Request Content #1 and Content #2 1002

Request Content #1 and Content #2 1004

Request Content #2 1006

Provide Content #2 1008

Provide Content #1 and Content #2 1010

Request Payment for Content #1 and Content #2 1012

Authorize Payment 1014

Provide Payment for Content #1 and Content #2 1016

Provide Payment for Content #2 1018

Provide Payment for Content #1 1020

Confirm Payment 1022

Provide Content #1 and Content #2 1024